



UNITED STATES PATENT AND TRADEMARK OFFICE

clo

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,252	12/21/2001	Pk Haridass Krishnamoorthy	01-ASD-226 (GT)	3333

200 7590 03/03/2004

EATON CORPORATION
EATON CENTER
1111 SUPERIOR AVENUE
CLEVELAND, OH 44114

EXAMINER

RIVELL, JOHN A

ART UNIT	PAPER NUMBER
----------	--------------

3753

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024,252

Applicant(s)

KRISHNAMOORTHY ET AL.

Examiner

John Rivell

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/18/03 (amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

New claim 23 has been added. Thus claims 1-23 are pending.

Claims 17-22 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 4.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 6, 8-10, 12, 14, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto et al. ('615) in view of Devall et al. or Morris et al.

The patent to Goto et al. ('615), in figures 5 and 6 for example, discloses "a one-way valve assembly (1) for a fuel tank filler neck (15, 19) comprising: (a) a tubular shell (16) having a valve seating surface (11) formed about one end thereof and having a portion (accommodating the unnumbered but illustrated "O-ring" seal) on the end opposite said one end and adapted for insertion in the end of an existing filler neck (at neck 19); (b) a moveable valve member (2) disposed for pivotal movement with respect to said one end of said tubular shell; (c) a spring (3) disposed to have one end thereof contacting in said shell (16) and having the end opposite said one end contacting said

valve member (via slot 9 in claw 7), wherein said spring is operative to bias and maintain said valve member into contact with said valve seating surface; and, (d) a flexible annular seal (5, 12) disposed to seal between said valve member (2) and said valve seating surface (11)..." as recited in claim 1.

Thus Goto et al. ('615) discloses all the claimed features with the exception of having "surfaces thereon operable for, upon insertion of a siphon hose, deflecting the hose away from the flexible annular seal".

The patent to Devall et al. discloses that it is known in the art to employ a "rib" including guide surface 212 attached to the filler neck check valve (see seal 192) for the purpose of diverting the end (79) of the siphon tube (32) away from the valving parts including the seal (192) on the valve permitting the end of the siphon tube to pass to fuel in the tank.

The patent to Morris et al. discloses that it is known in the art to employ a dome shaped pivotal valve head (see valve 20 in figure 3 and 5) which dome shape acts in concert with the insertion of the filler hose 32 for the purpose of deflecting the end of the filler hose 32 away from the seal elements attached to the valve head 20.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Goto et al. ('615) a specifically shaped valve head surface or "rib" on the pivotal valve head 2 for the purpose of diverting the end of a siphon tube away from the sealing parts on the valve permitting the end of the siphon tube to pass to fuel in the tank as recognized by Devall et al. or Morris et al.

Regarding claim 2, in Goto et al. ('615) "said valve member (2) is mounted on said spring (3) for limited lost motion for self alignment with said valve seating surface" via the tolerance of the fit between slot 9 and spring 3 as claimed.

Regarding claim 3, in Goto et al. ('615) "said annular seal (5, 12) is attached to said valve member (2) for movement therewith" as claimed.

Regarding claim 4 in Goto et al. ('615) "said spring (3) comprises a torsion spring with coil portion thereof received in a slot formed on the tubular member (16)" as claimed. Here the "slot" is read on the portion of shell portion 17 which receives the hanger arms of the valve 2 and hinge pin 18.

Regarding claim 6, in Goto et al. ('615), "said tubular shell and said valve member are formed of plastic material and said annular seal is formed of elastomeric material" as recited.

Regarding claim 8, in Goto et al. ('615) "said valve member (2 is) attached to said tubular shell (16) for pivotal movement" as claimed

Regarding claim 9, in Goto et al. ('615) "said valve member (2) is moveable from a position contacting said valve seating surface to an open position by insertion of a siphon hose through said reduced diameter end of said tubular shell" as claimed. Here the claim merely requires a capability of the claimed device.

Regarding claim 10, in Goto et al. ('615) "said spring (3) comprises a torsion spring with at least one coil (see the dotted line coil of fig. 6) formed thereon" as claimed.

Regarding claim 12, in Goto et al. ('615) "said spring (3) has one end thereof contacting said valve member (2) in the center thereof" at the slot 9, claw 7 as claimed.

Regarding claim 14, in Goto et al. ('615) "said valve member (2) includes a pair of arms (see fig. 1) extending therefrom with end portions thereof pivotally engaging said tubular shell" 16 as claimed.

Regarding claim 16, in Goto et al. ('615) as modified by Devall et al., "said surfaces include a rib (212) extending upwardly (relative) therefrom" as recited.

Regarding claim 23, in Devall et al. the "rib" 212 thereof is considered to provide "a camming action with the end of the siphon hose" as recited.

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto et al. ('615) in view of Devall et al. or Morris et al. as applied to claims 1-4, 8-10, 12, 14, 16 and 23 above, further in view of Latham et al.

The patent to Goto et al. ('615), as modified by Devall et al. or Morris et al., discloses all the claimed features with the exception of having the "slot" be sized to permit reciprocal movement of the coil of the spring and valve element prior to pivotal opening movement of the valve element. The patent to Goto et al. ('615) does in fact disclose the concept of reciprocal movement at the elongated hole 20 in the valve element pivot arms. The elongated slot of the valve element in conjunction with the fixed pivot hinge pin 18 permits the valve element to reciprocally move in a downstream direction prior to actual pivoting movement. Such reciprocal movement lessens damage to the seal element at the point of the seal closest to the hinge pin. Compare figs. 6 and 8.

The patent to Latham et al. discloses that it is known in the art to employ an elongated slot (32, 34 of fig. 2, 232 of fig. 11) within the valve body receiving a pivot

hinge pin (60, 260) of a pivotal check valve (58, 258) for the purpose of permitting the pivotal valve element to first move reciprocally relative to the valve seat to move the seal element off of the seat thus lessening damage to the seal at a point closest to the hinge pin.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Goto et al. ('615), as modified by Devall et al. or Morris et al., a slot in the valve body rather than in the pivot arms for the purpose of permitting the pivotal valve element to first move reciprocally relative to the valve seat to move the seal element off of the seat thus lessening damage to the seal at a point closest to the hinge pin as recognized by Latham et al.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goto et al. ('615) as applied to claims 1-4, 8-10, 12, 14, 16 and 23 above, further in view of Bartholomew.

The patent to Goto et al. ('615), as modified by Devall et al. or Morris et al., discloses all the claimed features with the exception of having "interspersed... electrically conductive material for facilitating electrical discharge of static electricity".

The patent to Bartholomew discloses that it is known in the art to employ interspersed electrically conductive material throughout the fuel filler neck 54 and vent hose 58 (see column 4, lines 33-58) for the purpose of preventing the buildup of static electricity which further reduces the chances of premature explosions.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Goto et al. ('615), as modified by Devall et al.

or Morris et al., interspersed electrically conductive material throughout the fuel filler neck of Goto et al. ('615) for the purpose of preventing the buildup of static electricity which further reduces the chances of premature explosions as recognized by Bartholomew.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goto et al. ('615) as applied to claims 1-4, 8-10, 12, 14, 16 and 23 above, further in view of Kippe et al.

The patent to Goto et al. ('615), as modified by Devall et al. or Morris et al., discloses all the claimed features with the exception of having an inwardly extending member inside of the tubular shell 16 to guide a siphon hose upon insertion of the siphon hose inside of the shell.

The patent to Kippe et al. discloses that it is known in the art to employ an internally extending rib 80" for the purpose of guiding an inserted siphon hose therein (see column 4, line 58 through column 5, line 2).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Goto et al. ('615), as modified by Devall et al. or Morris et al., an internally extending rib element for the purpose of guiding an inserted siphon hose therein as recognized by Kippe et al.

In response to applicants comments concerning Goto et al. ('615), the argument that Goto et al. ('615) includes an upstream surface on the valve that has a recess is noted and disagreed with. What appears to the eye as a recess (6?) is in fact a solid plate 6 that forms the valve proper. Element 6 is then encased by flange element 12 at

shoulder 13 thereof. The actual upstream surface of Goto et al. ('615) that would be contacted by an end of a siphon hose, upon insertion of the siphon hose, appears to be the smooth upstream surface of plate 6.

Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (703) 308-2599. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (703) 308-1272. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Rivell
Primary Examiner
Art Unit 3753

j.r.